CLAIMS

1. A method of scanning using X-ray equipment **characterised by** the steps of projecting two X-ray beams towards a moving or static object, sensing the images generated from the X-ray beams, detecting two spatial dimensions from the images, developing motion and intensity maps from the two spatial dimensions thereby to generate by the use of algorithms the third spatial dimension and to provide a data set for the construction of a 3D image for display on a viewing monitor.

2. A method according to Claim 1 **characterised in that** the object is carried on a conveyor belt.

3. A method according to Claim 2 **characterised by** the step of developing the third spatial dimension from moving representations of the flat screened object by calculating motion parallax maps for the intensity map which can be converted into depth coordinates using the fixed geometry of the conveyor belt or calibration markers on the conveyor belt.

4. A method according to Claim 1 **characterised in that** for two static images generated by the line scanners, the disparity map for the intensity maps is calculated from two parallel detector arrays and converted into depth coordinates using conventional stereo-algorithms and the fixed geometry of the X-ray equipment.

5. A method according to any one of the preceding claims **characterised in that** the data set is generated and comprises 3D coordinates for all visible object contours from which parallel projections in the three cardinal directions can be constructed.

6. A method according to any one of the preceding claims **characterised in that** algorithms are provided to allow real-time rotation of the 3D data set to permit continuous manipulation for the viewing angle by the operator.

7. A method according to any one of the preceding claims **characterised in that** algorithms are provided to allow the 3D images of the scanned object to be transferred into projection images.

8. A method according to Claim 7 **characterised in that** the algorithms are adapted to allow the adoption of any viewing angle.

9. An X-ray scanning device (1) for a static or moving object (O) for use in the method according to any one of the preceding claims **characterised by** an X-ray source (4) providing two or more X-ray beams (6, 8), and a sensor array (10, 12) provided for each beam (6, 8), the arrays (10, 12) being displaced spatially one from the other, the arrays being adapted to generate two two-dimensional images, a computer incorporating software adapted to calculate a third, depth dimension thereby to create a 3D image of the object, and a monitor for displaying the 3D image.

10. A device according to Claim 10 **characterised in that** the device (1) includes a conveyor belt (2) for carrying the object (O), and the sensor arrays (10, 12) are spatially disposed to capture two images of the moving object (O) to generate an intensity map and a motion map.

11. A device according to Claim 11 **characterised in that** the conveyor belt (2) is provided with calibration markers to provide a self-calibrating system.